most honorable names in Great Britain and it is especially desirable that the number of subscribers be great rather than the individual subscriptions, for in a memorial to this great epoch-maker in science should appear contributions from all those who appreciate his work or honor his memory, and their name is legion. The form which the Memorial is to take has not yet been decided, but it will probably include an endowment for a scholarship to carry on biological research. The English circular appropriately says: "though the works of CHARLES DARWIN form his best and most enduring memorial, his many friends and admirers feel that these should not be his only monument. They are desirous of handing down to posterity the likeness of a man who has done so much for the advancement of natural knowledge, possibly in the form of a statue to be erected in some public place. They wish further, if possible, to establish a Fund associated with his name, the proceeds of which will be devoted, in some way hereafter to be determined, to the furtherance of Biological Science."

In the English subscription list the amounts vary from two or three dollars to five hundred, so that any one can give, and we have no doubt that many readers of this will be glad to contribute within these limits. The home circular says that "subscriptions may be sent to Alexander Agassiz, Cambridge, Mass., who will acknowledge the same and forward them to the Treasurer of the English Executive Committee of the Darwin Memorial."—J. M. C.

Aralia racemosa, L.—This plant is well adapted to show the morphological character of a panicle. Two or three internodes from the ground is a leaf about 2½ ft. long. In its axis may be found 1 to 3 umbels. The next internode bears a leaf about 1½ ft. long. In this axis is a raceme of 4 to 7 umbels. The leaf of the following internode is only about ⅔ ft. in length. It bears a panicle of 4 to 7 umbels. The succeeding leaf is ⅜ in. long, the petiole equalling the ternately parted rudimentary blade. The axis contains 3 to 4 umbels in a panicle. Then follow two or three leaves scarcely ¼ in. long with undivided blades passing into triangular bracts. This is the normal condition, but intermediate states are found connecting the leaves morphologically with the bracts by a continuous series of specimens. What seems to be a large panicle is the primary stem bearing small racemes or panicles in the axis of leaves in their ordinary form or reduced to bracts.

This species is protandrous. The petals and stamens fall off before the 5 stigmas recurve to receive the pollen, insuring cross-fertilization.—A. F. FOERSTE, *Dayton, Ohio.*

Animal and Vegetable Chlorophyll.—To say that one difference between plants and animals is that the food of the former is inorganic and that of the latter organic is hardly a correct statement, for the food of both kinds of organisms is necessarily

organic and its consumption in both cases is attended by a true respiration. A better statement would be that plants, in general, have the power of making their own food, while animals, in general, do not. We recognize that the agent in this case is the granule of protoplasm colored by chlorophyll, just as in the consumption of the prepared food the activity is vested in uncolored protoplasm. The presence therefore of chlorophyll granules lies at the very basis of this distinction between plants and animals. It is generally stated that this does not ehold universally, as the fungi are devoid of chlorophyll and some animals are known to possess it. The question has now arisen, whether the so-called animal chlorophyll is the same as that of the plant. The results of some investigations upon this subject are given by K. Brandt in the *Popular Science Monthly* for October. The investigations seem to show that morphologically the animal chlorophyll is by no means the same as the plant, for the green bodies which appear in some animals are themselves cells rather than cell-contents, and are nothing else than unicellular plants which have immigrated to animal bodies. They are both morphologically and physiologically distinct from their hosts, for they can live when separated from them and form starch in the sunlight. Thus the distinction is based on the same principle as before, namely the power of originating, for now we can say not only that plants make their own food and animals do not, but also that plants make their own chlorophyll, while animals do not. But a strange revelation is the relation which these green algæ and other yellow algæ sustain to the animals in which they live. When they are absent the host animal must live like other animals, but when they are present they can prepare food for their host out of inorganic material and the animal can live with the surroundings of a plant. This partnership arrangement beween animals and plants upon the lowest confines of the two kingdoms may not seem unlikely now that it is suggested and reminds one of the sentence in Dr. Gray's *Darwiniana*, which says that "there is a limbo filled with organisms which never rise high enough in the scale to be manifestly either animal or plant, unless it may be said of some of them that they are each in turn and neither long." Chlorophyll thus holds the same relation to the bodies of animals which it inhabits as it does to plants, and although in the two cases it is morphologically distinct, it is physiologically the same.—J. M. C.

Epipactis Helleborine.—It may be of interest to you and the readers of the GAZETTE to learn that *Epipactis Helleborine* (the orchid, new to America, which was found near Syracuse, in 1879) has been discovered growing in considerable quantity on the wooded slope of Scajaquady's Creek, in the northerly portion of this city. The plant has been submitted to Gray, who while pronouncing it identical with the Syracuse plant, declares that he can discover no valid distinction between it and *Epipactis latifolia*. Perhaps 200 individuals were noticed.—DAVID F. DAY, *Buffalo, N. Y.*